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PALAEARCTIC MIGRANTS IN THE KIMBERLEY DIVISION

I. EASTERN BARN SWALLOW (*HIRUNDO RUSTICA GUTTURALIS*) AT DERBY

By PETER SLATER, Derby

On our arrival at Derby on January 20, 1960, a flock of swallows in the main street attracted the attention of my wife and myself. It was immediately apparent that the birds were not Welcome Swallows (*Hirundo neoxena*) because of the pure white underparts, the black band separating the rust-coloured throat from the white breast and the extremely long tail streamers on some individuals. Most of the birds appeared to be in moult, and one or both streamers were missing in many instances. The lack of white on the back or rump precluded the possibility of the birds being any of the three remaining Australian species.

Available references were consulted: Glenister (*The Birds of the Malay Peninsula, Singapore and Penang*, 1951: 69, 185); Peterson, Mountford and Hollom (*A Field Guide to the Birds of Britain and Europe*, 1954: 194); Mayr (*Birds of the South West Pacific*, 1945: 302); W. T. Loke (*A Company of Birds*, 1957: 54-5, 150) and N. W. Cayley (*What Bird is That?* 1956: Plate xxvii). From these sources it appeared that the birds were Eastern Swallows (*Hirundo rustica gutturalis*). A description and drawing of the birds were sent to Dr. G. F. Mees, of the W.A. Museum, who replied with information regarding the species, concluding, "I have always been very surprised about the lack of records for Australia, because the bird is a common winter visitor in Java and West New Guinea, whereas it has been recorded from several of the Lesser Sunda Islands, including Soemba, Flores and Wetar, but not Timor (Rensch, *Mitt. Zool. Mus. Berlin*, 17, 1931, p.551). Personally I would expect the species to be a regular visitor to our north coast." A description and photographs, taken with 400 mm. lens with SLR 35 mm. camera on Kodachrome film, were also forwarded to Dr. D. L. Serventy, who confirmed the identification. Attempts to take a specimen were unsuccessful.

About 30 birds were present in the main street on January 20, 1960. On January 24 the same number was observed at the town water tanks. On later occasions the following numbers were count-

ed on the light wires outside the Derby Junior High School: February 18, 92 birds; February 21, 110; February 25, 84. On February 27 the birds moved two miles east of the town to the Derby Meat Processing Company. They moved back to town several days later and, until March 22, 30 were observed daily at the school. On March 25 three swallows flew along the school verandah investigating the eaves. On the following day none were in evidence.

From September on a close watch was kept, and on November 7 a solitary bird was seen. On November 11 three were seen at the school. Between December 1 and 8, I opened the swimming pool daily at 6 a.m. and was able to observe three swallows bathing with Tree and Fairy Martins. A specimen was obtained at the pool after the bird had been bathing. It was fully mature and heavily in moult.

There was a slow increase of numbers, and on February 3, 1961, 15 were observed by Eric Lindgren and myself, and 63 by March 19. On April 2 some native children pointed out a large flock of about 300 birds apparently migrating. The flock moved in a north-easterly direction, and none were seen subsequently.

When the swallows were first identified, I alerted Mr. Kees Vermey in Wyndham and Dr. K. Immelmann at the Kimberley Research Station, but neither observer made any additional records. Mr. Vermey tried unsuccessfully to contact any birdwatchers in Darwin, and I have not been able to visit Broome or Yampi so am unaware as to the species' presence in these areas.

From available evidence it seems that *H. rustica gutturalis* is a regular visitor to Derby, arriving in early November and leaving at the end of March.

However according to the exhaustive review of the distribution and migration of the Barn Swallow by Arnold Frh. von Viettinghoff-Riesch (*Verbreitung und Zug der Rauchschwalbe (Hirundo rustica), Bonner Zoologische Beiträge, Sonderband 1955, p. 122*) there is only one previous record of the occurrence of this species in the Australian area. It was taken by Dr. F. M. Rayner of H.M.S. *Herald* on the north coast of Australia on October 18, 1860, and was described by Gould as a new species, *Hirundo fretensis* (*Handbook to the Birds of Australia, 1865, 1: 110*). The specimen went to the British Museum and was determined by Bowdler Sharpe as a juvenile of *Hirundo rustica* (*Cat. Birds Brit. Mus, 10, 1885: 137*). Gregory Mathews gave a coloured illustration of it in *A Supplement to the Birds of Norfolk and Lord Howe Islands, 1936, pl. 64*. The accompanying map (Fig. 1) of the breeding distribution and migratory pattern of *H. r. gutturalis* was re-drawn by Mr. G. E. Binsted from the chart in Viettinghoff-Riesch's paper, provided by Dr. Serventy.

The accompanying illustrated key should assist non-ornithological naturalists to identify any swallows observed in northern Australia. The Pacific Swallow (*Hirundo tahitica*) has not yet



Fig. 1.—Breeding distribution and migration limits of the Eastern Swallow.

—After Vietinghoff-Rlesch, 1955.

been observed in Australia, and as it is so similar to the resident Welcome Swallow (*H. neoxena*) any suspected record should be accompanied by a careful description and/or a specimen.

A GUIDE TO THE SWALLOWS

- | | | | |
|----|----|--|-----------------------|
| 1. | A. | Black back and rump, white spots in tail | 2 |
| | B. | White on back or rump, no white in tail | 5 |
| 2. | A. | Grey below | 3 |
| | B. | White below | 4 |
| 3. | | Chestnut face and throat, | |
| | A. | Long tail streamers | Welcome Swallow. |
| | B. | Short tail streamers | Pacific Swallow. |
| 4. | | Chestnut face and throat with black border | Eastern Swallow. |
| 5. | A. | White on scapulars and back, rump black | White-backed Swallow. |
| | B. | Scapulars (back) black, rump white | 6 |
| 6. | A. | Head rusty red | Fairy Martin. |
| | B. | Head largely black, rusty forehead | Tree-Martin. |

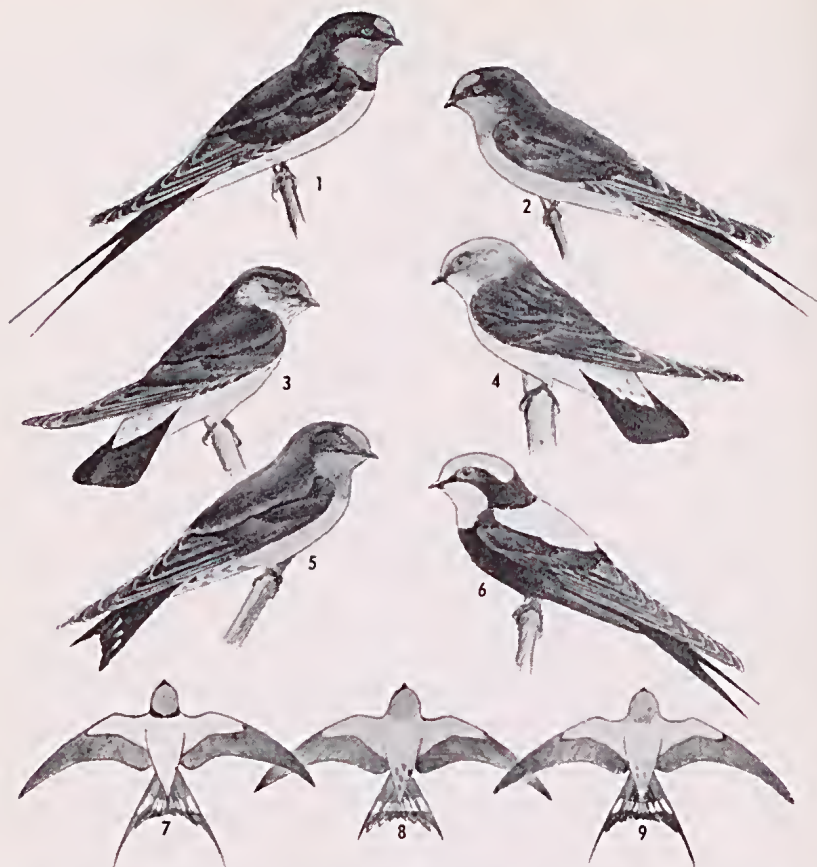


Fig. 2.—Plumage patterns of various swallows: 1, Eastern Swallow; 2, Welome Swallow; 3, Tree-Martin; 4, Fairy Martin; 5, Pacific Swallow; 6, White-backed Swallow; 7, Eastern Swallow; 8, Pacific Swallow; 9, Welome Swallow. The last three illustrations show the birds viewed from underneath.

—drawn by Peter Slater

II. YELLOW WAGTAIL (*MOTACILLA FLAVA*) AT DERBY

By ERIC LINDGREN, Shenton Park, and PETER SLATER, Derby

On December 7, 1960, a bird identified as a Yellow Wagtail (*Motacilla flava*) was seen near the overflow of Yabbagoody Mill, 7 miles east of Derby. The area about the mill has been trodden clear of undergrowth by cattle and the tank overflows almost continuously, forming a marshy patch only a few square yards in area in which there is a lush growth of grass.

The bird was first seen in the early afternoon, when one of us (E.L.), in the company of Mr. Kees Vermey of Wyndham, visited the mill to photograph birds coming in to drink. On first glance the bird was thought to be a Pipit (*Anthus novae-seelandi-*

iae) but closer examination revealed a number of differences. A field description was therefore made, as follows:

Upper parts and wings uniform grey, not streaked as in a Pipit; with two pale bars on the wing coverts, secondaries darker grey. Breast greyish, darker in the centre. Remainder of underparts off-white, with a yellowish wash on the left thigh but not on the right. Head grey, similar to the back, with indistinct stripes above and below the eye. Throat white. Tail dark grey, edged white; legs long and brown.

The bird was watched for about 30 minutes from a distance of 20 yards with 10 x 50 binoculars. All the time it behaved in typical pipit-like manner, catching small insects in the swampy grass, and bobbing the body and tail in a constant up and down motion.

On returning to Derby reference was made to Delacour (*Birds of Malaysia*, 1947: 197) and to Peterson, Mountford and Hollom (*A Field Guide to the Birds of Britain and Europe*, 1954: 266). Both of these books left no doubt that the bird was a *Motacilla* and Delacour's description of the immature *M. flava*, "above olive brown; below whitish with yellow patches and wash," seemed to indicate that this was the bird. However the bird did not have the buff chin and brown bib described by Peterson *et al.* for the juvenile of the yellowest European race, *M. flava flavissima*. It was decided that the bird was either an immature *M. flava* or an adult in winter plumage.

An attempt made to collect the specimen an hour later when both of us were present unfortunately failed and the bird flew off in a southerly direction. We both decided the bird was definitely a *Motacilla* and confirmed the previous description before firing.

There is only one other record of this species in Australia. This was an adult male taken at Bimbi on the Dawson River in central east Queensland on June 10, 1905 by H. G. Barnard, who described the circumstances of its collection as follows: "When first seen it was on the ground, and ran along like the Australian Pipit. . . . During flight the white feathers on each side of the tail were very conspicuous. It is the only one I have ever seen, and my attention was first attracted to it by its sharp whistling note."

This specimen was exhibited at a meeting of the Linnean Society of N.S.W. on November 29, 1905 by A. J. North who proposed to describe it as a new species *Motacilla barnardi* (Linn. Soc. N.S.W., Abstr. Proc., Nov. 29, 1905: vii.) The name was placed in the synonymy of *Motacilla flava simillima* by Hartert (*Die Vögel der paläarktischen Fauna*, 3, 1921: 2096) and this procedure has been followed by later authors.

Four subspecies of this Palaearctic species "winter" in the East Indies, *M. f. simillima*, *M. f. taivana*, *M. f. maeronyx* and *M. f. tschutschensis*. The first-named is the commonest and the most far reaching of these, having been recorded as a straggler in the Mimika River region at the foot of the Nassau Mountains in Papua (Mayr, *List of New Guinea Birds*, 1941: 105) as well as the

Queensland record just cited. It is most likely, therefore, that the bird seen near Derby was of this subspecies. However in the absence of a specimen, particularly with the complex *flava* group, nothing definite can be said.

The foregoing account was submitted to Professor Ernst Mayr, of the Museum of Comparative Zoology, Harvard, and he commented as follows: "I have no doubt that the bird was correctly identified. I checked our specimens and find that individuals of *simillima* rarely have grey on the breast. On the other hand this marking is rather characteristic of a small *tschutschensis*. Naturally one cannot identify a sight record subspecifically in such a difficult species but there is a good chance that the bird was *tschutschensis*."

NOTES ON WESTERN AUSTRALIAN ORCHIDACEAE

By A. S. GEORGE, State Herbarium

I. REDUCTION OF FIVE SPECIES TO SYNONYMY

In the course of research into the original descriptions and type specimens of Western Australian orchids the author found that a number of species at present accepted as valid were identical with earlier described species. The following are some of these.

Prasophyllum paludosum W. H. Nicholls

Viet. Nat., 64, 1948: 175. Type locality: Bayswater, leg. W. H. Nicholls, Oct. 1946.

Specimens which had been identified as *Prasophyllum muelleri* C. R. P. Andrews (*Journ. Proc. Muell. Bot. Soc. W.A.*, 1 (9), 1902: 19; type locality: Guildford, leg. C. R. P. Andrews, Nov. 1901), and checked with its type, were sent to Melbourne, where Mr. J. H. Willis confirmed that they were also identical with the type of *P. paludosum*. The original descriptions were compared and found to differ only in the following particulars:

- i. Leaf blade shorter than the flower spike in *P. paludosum*, as long or longer in *P. muelleri*.
- ii. Petals narrower than sepals in *P. paludosum*, broader in *P. muelleri*.
- iii. Anther shorter than the rostellum in *P. paludosum*, as long in *P. muelleri*.

Examination of all the specimens in the W.A. State Herbarium shows that such variation may occur within one collection. Thus there is no sound basis for the retention of both species and *P. paludosum* becomes a synonym of *P. muelleri*.

Prasophyllum muelleri has for some years been confused with *P. elatum* R.Br. (type locality: Port Jackson, R. Brown) but is actually a distinct species. Nicholls made it a variety of Robert Brown's plant, but it differs considerably in the floral details, especially of the column and labellum.

Prasophyllum horburyanum Rupp

Vict. Nat., 59, 1942: 122. Type locality: Kumarl, leg. L. Horbury, May 1938.

The type specimens are in the State Herbarium of Western Australia and only a very few flowers are in a reasonable condition. Specimens have since been collected from near Tinkurrin, Lake Grace, Newdegate, Lake King, Ravensthorpe, and Salmon Gums, and differ only in the size of the flowers. They are identical with Rupp's type specimens and also with the type of *Prasophyllum fuscoviride* Reader (*Vict. Nat.*, 14, 1898: 163; type locality: Lowan, Victoria, leg. Miss F. Reader, 1892), which was obtained on loan from Melbourne. Moreover, there is nothing in the original description of *P. horburyanum* to separate it from that of *P. fuscoviride*. It must therefore fall into synonymy with the latter which is the correct name for the western plant.

The species also occurs in South Australia.

Pterostylis turfosa Endl.

Lehmann, *Pl. Preiss.*, 2, 1845: 5. Type locality: "In turfoso-arenosis deflagratis ad Stirlings Terrace [= Albany] Preiss 2632, 20 Sept. 1840."

For many years *Pterostylis turfosa* has been regarded as occurring only in Western Australia and *P. barbata* Lindl. (*Swan Riv. App.* 54, 1839) only in the Eastern States. The difference between the two has been taken as the relative lengths of the filiform points of the lateral sepals. In W.A. all variations occur, from dry area plants with short sepal points to those from wetter parts with very long points. No other substantial differences are apparent, either from the original descriptions or from the numerous specimens in the State Herbarium. Now the type locality for *P. barbata* is "Swan River, leg. J. Drummond". Thus there is not even a geographical basis for separating the two species and *P. turfosa* must fall into the synonymy of *P. barbata*, the latter being the earlier and correct name for the western plant. It also remains correct for the Eastern States plant, unless the study of fresh specimens reveals sufficient differences to warrant a new name for it.

Caladenia tenuis Fitzg.

Gard. Chron., 1, 1882: 462. Type locality: Champion Bay, leg. R. Fitzgerald, Aug. 4.

This species was thought to have been unrecorded since the type was collected, until a photocopy of Fitzgerald's unpublished illustration was obtained from the Mitchell Library in Sydney. The plant was immediately recognised as *Caladenia hirta* Lindl. (*Swan Riv. App.* 52, 1839; type locality: Swan River, leg. J. Drummond). A check of the original descriptions revealed no significant difference. In *C. tenuis* the calli were described as being "in two bands each consisting of four rows", and in *C. hirta* in four to six

rows. However, this is a variable feature of the plant and there is thus no basis on which to separate the two species. Consequently *C. tenuis* becomes a synonym of *C. hirta*.

Caladenia purdieana C. R. P. Andrews

Journ. Proc. Muell. Bot. Soc. W.A., 1 (10), 1902: 39. Type locality: Darling Range, Kelmseott, leg. C. R. P. Andrews, Oct. 1901.

This species and *C. paniculata* Fitzg. (*Gard. Chron.*, 1, 1882: 461; type locality: Upper Hay River, leg. R. Fitzgerald, Sept.) have both been retained due to a misunderstanding of the original descriptions. Fitzgerald described the calli as being "united by a long central callus" while Andrews referred to "a narrow longitudinal plate . . . bordered by two rows of thick, linear divergent calli." The type specimens of *C. purdieana* are in the Blackall Collection at the State Herbarium of W.A.; an examination of these and Fitzgerald's illustration in *Australian Orchids* shows that the structures are identical. There are no other differences, so *C. purdieana* must fall into the synonymy of *C. paniculata*.

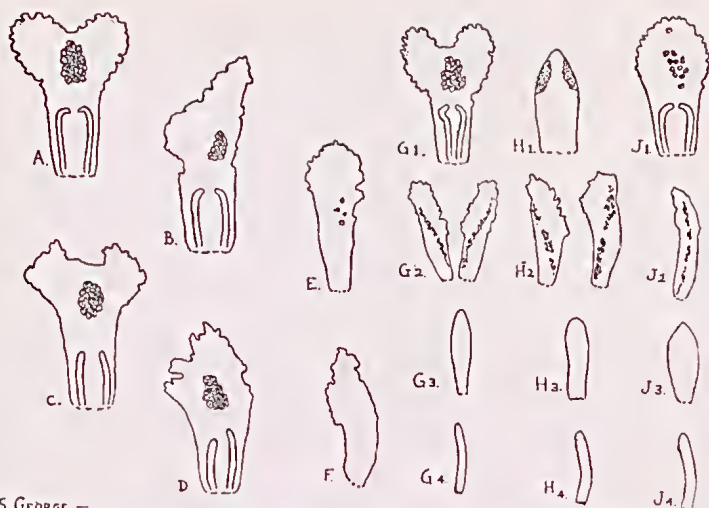
II. THE STATUS OF *GOADBYELLA GRACILIS* R. S. ROGERS

Trans. Roy. Soc. S. Austral., 51, 1927: 294.

Goadbyella gracilis, the "Lost Orchid", is known only from the type collection, made at Pindalup in 1927 by P. Barwise. Since then searching in the same area has failed to reveal any further specimens. The suggestion was made by Mr. R. D. Royce, of the State Herbarium of Western Australia, that the species may be a hybrid between species of *Microtis* and *Prasophyllum*. This prompted a study of the two plants of the type collection, with the following results.

i. *Habit*. The arrangement of the flowers is extremely haphazard. In the genera *Microtis* and *Prasophyllum* irregular spikes are usually only found in damaged plants, although in the former the spaces between individual flowers may vary slightly. The specimens of *Goadbyella* are not damaged, yet for the lowest few centimetres the flowers are irregularly spaced. Above this they become clustered with shorter intervals, often with several flowers arising from the same level (but not whorled). There follows a densely packed section, then a few more irregular intervals before a crowded apex.

ii. *Morphology of the flowers*. The only constant floral segments appear to be the petals and the dorsal sepal. The illustration shows the variation of the other parts. This is not even constant in both specimens. The flowers are reversed, as in *Prasophyllum*, though some appear to be almost vertical. The lateral sepals of some are reminiscent of the petals of *Prasophyllum hians* Reicbh., though also similar to deformed *Microtis* labella. Other *Microtis*-



- A. S. GEORGE -

Goadbyella gracilis R. S. Rogers. A.-D., labella of holotype. E. and F., lateral sepals of holotype. G.-J., flowers of isotype: 1, labella; 2, lateral sepals; 3, dorsal sepals; 4, petals. All drawings enlarged.

like features are the labellum, petals and column (where it is properly formed).

iii. *Fertility of the flowers.* A few flowers, mainly along the lowest part of the spike, have ovaries ("pedicellate" according to Rogers). The remainder, which he termed "sessile", actually have no ovaries, or only abortive ones. Furthermore the column, while apparently normal in many flowers, is deformed in several. Although the lowest flowers are beginning to wither, there is no sign that any have been fertilised.

With such variation and deformation, this plant can hardly be normal, and must surely be regarded as an aberrant form rather than a true species. It may be a hybrid as mentioned above, or as seems more likely from studying the specimens, a deformed *Microtis*. Whatever the case it is apparently unable to reproduce itself and its genetics must remain unknown unless it is again seen in the fresh state.

ACKNOWLEDGEMENTS

I would like to thank the National Herbarium of Victoria for supplying on loan the type specimen of *Prasophyllum fuscoviride*; Mr. J. H. Willis, of the same Herbarium, for comparing *Prasophyllum muelleri* with *P. paludosum*; and the State Herbarium of South Australia for the type of *Goadbyella gracilis*. Miss A. M. White, the Librarian of the Department of Agriculture, obtained photocopies of Fitzgerald's unpublished illustrations. Mr. R. D. Royce gave assistance in preparing the article.